

University of Maine at Augusta
Kennebec County
Augusta, Maine
A-602-71-H-R

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**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. University of Maine at Augusta (UMA) has applied to renew their Air Emission License permitting the operation of emission sources associated with their Augusta, Maine educational facility.
2. This license renewal will also reflect emission unit nomenclature changes.

B. Emission Equipment

UMA is authorized to operate the following air emission units:

Fuel Burning Equipment

<u>Equipment</u>	<u>Formerly Called</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % Sulfur</u>	<u>Stack #</u>
6-BDK-A	6LRC	4.2	30.0	#2 Fuel Oil, 0.5%	6
6-BDK-B	6Libr.	1.5	13.9	#2 Fuel Oil, 0.5%	6
2-JH	Jewett Hall Boiler #2	5.04	36.0	#2 Fuel Oil, 0.5%	1
16-RH	NA	1.06	7.75	#2 Fuel Oil, 0.5%	16
18-STC-A	Boiler #1A	1.5	10.8	#2 Fuel Oil, 0.5%	1
18-STC-B	Boiler #1B	1.5	10.8	#2 Fuel Oil, 0.5%	1
17-BDK-G	17 LRC Generator	1.55	11.6	Diesel, 0.05%S	17

UMA has additional insignificant activities, which do not need to be listed in the above table.

C. Application Classification

The application for UMA does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only.

II BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent best practical treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boiler Units

UMA utilizes six boiler units at their Augusta educational facility, primarily for facility hot water and heating needs. The six boilers have a total maximum design heat input capacity of 16.35 MMBtu/hr, firing #2 oil with a maximum sulfur content no greater than 0.5% by weight.

All six boiler units individually have maximum heat input capacities below 10.0 MMBtu/hr, therefore none of the boilers are subject to EPA NSPS Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units applicable to boilers with a heat input of greater than 10 MMBtu/hr and manufactured after June 9, 1989).

As previously licensed, UMA shall be restricted to firing no more than 600,000 gallons per year (gal/yr) of #2 fuel oil with a maximum sulfur content of 0.5% by weight, based on a twelve-month rolling total in the boiler units. In order to demonstrate compliance with the boiler fuel use restriction, UMA shall maintain a fuel use record, which shall include purchase receipts indicating amount of fuel purchased and supplier certification indicating the sulfur content of the purchased fuel. Fuel use records shall be maintained on a monthly basis, in addition to the twelve month rolling total.

A summary of the BPT analysis for the six boiler units is as follows:

1. For boiler units 6-BDK-A, 6-BDK-B and 16-RH, BPT for PM and PM₁₀ limits are derived from Chapter 103 and are 0.12 lb/MMBtu.
2. For boiler units 2-JH, 18-STC-A and 18-STC-B, BPT for PM and PM₁₀ limits shall be 0.08 lb/MMBtu.
3. BPT for #2 fuel oil sulfur content is no greater than 0.5% sulfur by weight.
4. SO₂, NO_x, CO, VOC emissions rates are based on AP-42 emission factors for boilers of less than 100 MMBtu/hr dated 9/98.
5. Visible emissions from each stack shall not exceed 20% opacity on a six-minute block average basis, except for no more than 1 six-minute block average in a 3-hour period.

C. Stand-by Diesel Generator Unit

UMA utilizes a small stand-by diesel generator unit, designated 17-BDK-G, with a rated input capacity of 1.55 MMBtu/hr, with a maximum firing rate of 11.6 gallons per hour of diesel fuel oil with a maximum sulfur content no greater than 0.05% sulfur by weight.

The stand-by diesel generator unit is limited to firing no more than 5800 gal/yr of diesel fuel based on a twelve-month rolling total. In order to demonstrate compliance with the stand-by diesel generator unit fuel use restriction, UMA shall maintain a fuel use record, which shall include purchase receipts indicating amount of fuel purchased and supplier certification indicating sulfur content of the purchased fuel. Fuel use records shall be maintained on a monthly basis, in addition to the twelve month rolling total.

A summary of the BPT analysis for the stand-by diesel generator unit, 17-BDK-G, is as follows:

1. BPT for PM and PM₁₀ limits are derived from Chapter 103 and are 0.12 lb/MMBtu.
2. SO₂, NO_x, CO and VOC emission limits are based upon AP-42 data dated 10/96 for diesel engines of less than 600 HP.
3. Visible emissions from Stack #17 shall not exceed 20% opacity on a 6-minute block average except, for no more than two 6-minute block averages in a 3-hour period.

D. Annual Emission Restrictions

- UMA shall be subject to an annual fuel usage restriction for the boiler units of no more than 600,000 gallons per year #2 fuel oil with a sulfur content of no greater than 0.5% sulfur by weight based on a twelve-month rolling total.

- UMA shall be subject to an annual fuel usage restriction for the stand-by diesel generator 17-BDK-G of no more than 5,800 gallons per year diesel fuel oil with a sulfur content of no greater than 0.05% sulfur by weight based on a twelve-month rolling total.

Total Allowable Annual Emissions for the Facility
(used to calculate the annual license fee)

Pollutant	Tons/yr		
	Boilers	Diesel	Total
PM	5.04	0.05	5.1
PM ₁₀	5.04	0.05	5.1
SO ₂	21.3	0.02	21.5
NO _x	6.0	1.8	7.8
CO	1.5	0.4	1.9
VOC	0.1	0.1	0.2

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a minor source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source. Based on the total facility emissions, UMA is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-602-71-H-R, subject to the following conditions:

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 MRSA §353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records, to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.

- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for the renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - b. pursuant to any other requirement of this license to perform stack testing.
 - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

- (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
- (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request of the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

SPECIFIC CONDITIONS

- (16) Boiler Units
- A. UMA shall be subject to an annual fuel usage restriction for the boiler units of no more than 600,000 gallons per year #2 fuel oil with a sulfur content of no greater than 0.5% sulfur by weight based on a twelve-month rolling total. [MEDEP Chapter 115, BPT]

B. UMA shall maintain a fuel purchase record which shall include fuel purchase receipts indicating the amount of fuel purchased and certification from the supplier indicating the sulfur content of the purchased fuel. [MEDEP Chapter 115, BPT]

C. Boiler emissions shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
6-BDK-A	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.5	0.5	2.1	0.6	0.2	0.01
6-BDK-B	lb/hr	0.2	0.2	0.8	0.2	0.1	0.004
2-JH	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.4	0.4	2.6	0.7	0.2	0.01
16-RH	lb/hr	0.1	0.1	0.5	0.2	0.04	0.003
18-STC-A	lb/hr	0.1	0.1	0.8	0.2	0.05	0.01
18-STC-B	lb/hr	0.1	0.1	0.8	0.2	0.05	0.01

[MEDEP Chapter 115, BPT]

D. Visible emissions from each stack shall not exceed 20% opacity on a six-minute block average basis, except for no more than 1 six-minute block average in a 3-hour period. [MEDEP Chapter 101]

(17) Stand-by Diesel Generator Unit

A. UMA shall be subject to an annual fuel usage restriction for the stand-by generator 17-BDK-G of no more than 5,800 gallons per year diesel fuel oil with a sulfur content of no greater than 0.05% sulfur by weight based on a twelve-month rolling total. [MEDEP Chapter 115, BPT]

B. UMA shall maintain a fuel purchase record which shall include fuel purchase receipts indicating the amount of fuel purchased and certification from the supplier indicating the sulfur content of the purchased fuel. [MEDEP Chapter 115, BPT]

C. Emissions shall be limited to the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
17-BDK-G	lb/hr	0.2	0.2	0.1	6.8	1.5	0.5

[MEDEP Chapter 115, BPT]

D. Visible emissions from Stack #17 shall not exceed 20% opacity on a 6-minute block average except, for no more than two 6-minute block averages in a 3-hour period. [MEDEP Chapter 101]

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- (18) UMA shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard. [38 MRSA §605-C, MEDEP Chapter 115]
- (19) UMA shall pay the annual air emission license fee within 30 days of September 30 of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for the revocation of the license under 38 MRSA §341-D, Subsection 3. [38 MRSA 353-A, 38 MRSA 341-D]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2005.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

The term of this order shall be for five (5) years from the signature date above.

Date of initial receipt of application: **April 26, 2005**

Date of application acceptance: **April 27, 2005**

Date filed with the Board of Environmental Protection _____

This Order prepared by Peter G. Carleton, Bureau of Air Quality